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LETTER AND COMMENTS FROM RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT REGARDING DRAFT FEASIBILITY STUDY SITE 13 TANK FARM 5 NS NEWPORT RI
12/13/2011
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

13 December 2011

Roberto Pagtalunan
NAVFAC MIDLANT (Code OPTE3)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Draft Feasibility Study
Site 13, Tank Farm 5, NETC

Dear Mr. Pagtalunan,

The Office of Waste Management at the Rhode Island Department of Environmental Management has conducted a review of the *Draft Feasibility Study*, dated October 2011 for Tank Farm 5 (Site 13), Naval Station Newport, located in Newport, RI. As a result of this review, this Office has generated the attached comments on the *Draft Feasibility Study.*

Please be advised that any conclusions presented in this document or areas identified for remediation will have no bearing on areas addressed under the State Program.

If you have any questions in regards to this letter, please contact me at (401) 222-2797, extension 7020 or by e-mail at pamela.crump@dem.ri.gov.

Sincerely,

Pamela E. Crump, Sanitary Engineer
Office of Waste Management

cc: Matthew DeStefano, DEM OWM
Gary Jablonski, DEM OWM
Richard Gottlieb, DEM OWM
Deb Moore, NSN
Kymberlee Keckler, EPA Region I
Steve Parker, Tetra Tech

RIDEM's Comments on the
Draft Feasibility Study
Site 13, Tank Farm 5, NETC

1. **Page ES-1, Executive Summary; 5th paragraph, 2nd sentence.**

   "The screening ecological risk assessment (ERA)(Tetra Tech, 2011a) did not identify the potential for ecological risks to the terrestrial and aquatic receptors exposed to chemicals associated with DU4-1."

   Please replace DU4-1 with DU5-1.

   As you are aware, RIDEM had several concerns with the methods used in this screening ecological risk assessment, and requested that the Navy complete the full baseline ecological risk assessment for both Tank Farms 4 & 5. These concerns are currently under discussion. As such, the submitted comments do not address ecological concerns or ecological areas which may require remediation. Comments on these potential areas of concern will be submitted at a later date.

2. **Page ES-2, Executive Summary; 2nd paragraph, 2nd sentence.**

   "Analytical results from current soil and groundwater samples were compared with these remediation goals."

   Please note that all existing data for this site, including older data obtained prior to the Data Gaps Assessment, must be included in this Feasibility Study to ensure that all areas that may require remediation, land use controls, etc. are being addressed. The remedial alternatives proposed in this Feasibility Study are solely based on the data obtained during the Data Gaps Assessment. Please revise this FS to include all historical investigations.

3. **Page ES-2, Executive Summary; 5th bullet, last sentence.**

   "...soil was eliminated as a media of concern for the site."

   Please be advised that all areas exceeding RIDEM's Residential Direct Exposure and Leachability Criteria, including TPH, must be identified and remedial alternatives must be proposed in this FS. Concentrations above residential criteria are proposed to be left in place; therefore, soil must not be eliminated as a media of concern for the site. Please revise this FS to include an evaluation of remedial alternatives for soil.

4. **Page ES-2, Executive Summary; 3rd paragraph, 3rd sentence.**

   "...due to the low concentrations of COCs present, only two remedial alternatives were developed for detailed analysis."

This report limits groundwater alternatives to monitoring, containment and removal with only monitoring being retained. Other groundwater treatment alternatives, such as in situ treatment technologies, should also be evaluated. This technology is a viable option for restoring the geochemistry of the aquifer in areas where historical releases have occurred within the tank farm. Please modify the report accordingly.

5. Page 1-1, Introduction; 4th paragraph, last sentence.

"It is this DGA report that provides the basis of this FS."

Please see comment #2.

6. Page 1-2, Objectives and Approach; 1st paragraph, last sentence.

"The Site COCs, identified in the DGA report include manganese in soil, and arsenic, cobalt, iron and manganese in groundwater."

Once an unacceptable CERCLA risk is identified at a site, the remedial alternatives presented in the FS must meet ARARs, including RIDEM's Remediation Regulations. Please ensure that this FS addresses all contaminants exceeding RIDEM's Residential Direct Exposure, Leachability and Groundwater Criteria, including contaminants that were not originally risk-drivers (COCs). Please develop remedial alternatives to address all of these exceedances at this Site.

7. Page 1-4, Section 1.4, Tank Farm 5 Background Information; last paragraph.

"...confirmation sampling for CERCLA contaminants was not conducted during this removal action."

This statement is not correct. Please replace with *"Limited confirmation sampling for CERCLA contaminants was conducted during this removal action."*

8. Page 1-6, Section 1.4.1, 2004-2007; 1st sentence.

"In October 2004, the Navy began field work on a Site Investigation and removal action to fully characterize the entire Site."

Please remove the underlined text from the above statement as the Navy did not fully characterize the entire Site and did not propose to do so during this investigation.

9. Page 1-6, Section 1.4.1, 2004-2007; Bullet.

Please include a more thorough discussion of the investigation and removal action performed at the former burn chamber/OWS, including a description of the size of the area backfilled in which only limited confirmation samples were taken.

10. Page 1-12, Section 1.8, Nature and Extent of Contamination; whole section.

RIDEM does not concur with the background comparison in this report. Please be advised that RIDEM, to date, has not accepted the "Basewide Background Study Report". Contaminants cannot be screened out based on background if there is not an EPA and RIDEM approved background study. The background study must meet the requirements of RIDEM's Remediation Regulations. It is suggested that a site-specific background study be conducted for these sites.

11. Page 1-14, Section 1.8, Nature and Extent of Contamination; 3rd & 4th paragraphs.

Regarding the RSLs for tap water, please state in this section whether they are based on federal MCLGs, federal risk-based standards or RIDEM groundwater standards.

12. Page 1-14, Section 1.9, Fate and Transport Characteristics of Site Contaminants; 1st paragraph.

Please indicate if lead was detected in surface or subsurface soil at levels exceeding federal RSLs or RIDEM RDEC or Leachability Criteria. Be advised that RIDEM lead standards (Res.-150 mg/kg, I/C-500 mg/kg) are more stringent than EPA's (Res.-400mg/kg, I/C-800 mg/kg).

13. Page 1-14, Section 1.9, Fate and Transport Characteristics of Site Contaminants; 2nd paragraph.

Please include a comparison of detected groundwater concentrations to RIDEM Groundwater Criteria in this paragraph.

14. Page 1-17, Section 1.10, Soil Risks; 2nd paragraph.

"...PRGs were not calculated for residential or industrial exposure to soil".

Refer to comments 3 & 6. Please develop PRGs for soil for contaminants exceeding RIDEM's Residential Direct Exposure, Leachability and Groundwater Criteria, including contaminants that were not originally risk-drivers (COCs), and revise this FS accordingly.

15. Page 1-17, Section 1.10, Soil Risks; whole section.

Please ensure that any exposure routes, contaminants or areas that exceed RIDEM's risk levels of 10^{-6} for individual risk and 10^{-5} for cumulative risk are retained in this FS.

16. Page 1-18, Section 1.10, Soil Risks; 2nd paragraph.

"It was found that the arsenic concentrations at the Site are within the background concentrations of one of the soil types represented, and above the background

concentrations of the other. This uncertainty suggests risk management be applied before directing remedial actions to address this constituent."

Please be advised that RIDEM did not approve the Basewide Background Study. Please provide a figure, in the response to comments, showing the soil types on and adjacent to Tank Farm 5, as this will have a bearing on which portions of the background study can be used to determine background.

17. Page 1-18, Section 1.10, Groundwater Risks; whole section.

Please ensure that any exposure routes, contaminants or areas that exceed RIDEM's risk levels of 10^{-6} for individual risk and 10^{-5} for cumulative risk are retained in this FS.

18. Page 1-19, Section 1.10, Sediment/Surface Water Risks; whole section.

This section notes that the concentrations in these media are within EPA risk range. Please be advised that while a contaminant may fall within the 10^{-4}–10^{-6} EPA risk range, remedial action may still be required. Please report the associated site risk values for each exposure media. This section should also note whether the concentration for contaminants in these or any other media falls with RIDEM's risk range.

19. Page 1-19, Section 1.11, Ecological Risk Assessment; whole section.

Please see comment #1.

20. Page 1-20, Section 1.11, Ecological Risk Assessment; 3rd paragraph.

This paragraph discusses soil boring SB-934 which is located on Tank Farm 4, not 5. Please remove this paragraph or revise as necessary.

21. Page 2-3, Section 2.1.4, Identification of Applicable or Relevant and Appropriate Requirements; whole section.

Please ensure that all of the State ARARs listed on the attached table are included in the list of ARARs in Tables 2-1, 2-2 and 2-3 of this Feasibility Study.

22. Page 2-4, Section 2.1.4.1, Soil; 1st paragraph, 2nd sentence.

Please be advised that the State of Rhode Island Oil Contaminated Soil Policy (RIDEM, 1991) must be listed in the ARAR Tables and retained in this FS.

23. Page 2-4, Section 2.1.4.1, Groundwater; 1st paragraph.

Please be advised that groundwater must also meet any more stringent State groundwater standards.

24. Page 2-5, Section 2.2, Development of Preliminary Remediation Goals (PRGs); 2nd paragraph.

"The screening level ERA did not identify unacceptable risks to ecological receptors; therefore, COC-selection and PRG-development were based on human health risks only."

Please see comment #1.

25. Page 2-6, Section 2.2.2, Derivation of Human Health Risk-Based Preliminary Remediation Goals; 3rd paragraph.

Please be advised that under RIDEM's Remediation Regulations, recreational standards are the same as residential standards, except in certain circumstances. Please refer to the definition of "Recreational Facility for Public Use" in Section 3.62 of the revised regulations (Nov 2011).

26. Page 2-8, Section 2.2.3, Applicable or Relevant and Appropriate Requirements and To-Be-Considered Guidance for PRGs; 2nd paragraph.

Please be advised that this Site's groundwater classification is GA/NA; therefore, RIDEM's GA Leachability Criteria shall be included as ARARs for this Site.

27. Page 2-8, Section 2.2.3, Applicable or Relevant and Appropriate Requirements and To-Be-Considered Guidance for PRGs; 3rd paragraph.

Please be advised that the State's groundwater standards must be retained as ARARs for this Site. Please retain this paragraph in this FS.

28. Page 2-8, Section 2.2.4, Background Concentrations; whole section.

RIDEM does not concur with the background comparison in this report. Please be advised that RIDEM, to date, has not accepted the "Basewide Background Study Report".

29. Page 2-10, Section 2.2.5.2, Risk Management for Groundwater, Cobalt

"...cobalt in groundwater may be ubiquitous in the area since a source has not been identified, is likely a result of naturally occurring cobalt in the bedrock and bedrock derived soil".

Cobalt concentrations in groundwater could be present due to the use of No. 6 Fuel Oil at these tank farms. Please state this in this section of the FS.

30. Page 2-12, Section 2.2.5.2, Risk Management for Groundwater; 2nd paragraph.

Concentrations of manganese detected at this Site present an unacceptable risk, as the CTE risk to the child resident is HQ=2.3 via future potable use of groundwater. The Navy must develop remedial alternatives to address manganese in groundwater in this FS.

31. Page 2-13, Section 2.3.1, Remedial Action Objectives for Soil; 1st paragraph.

"...the HI associated with inhalation of subsurface soil by future construction workers exceeds 1."

Please develop a remedial action objective (RAO) to protect construction workers from exposure to manganese in soil dust and include this RAO in this FS.

32. Page 2-15, Section 2.3.1, Remedial Action Objectives for Soil; 2nd paragraph.

"Currently, industrial use with restricted recreational use is expected to be the most likely future land use for this site."

Please be advised that industrial/commercial use of the Site will require restrictions enforceable by RIDEM, including an ELUR, which must be clearly defined in the ROD. If an ELUR is placed on the Site, all surface soil that does not meet industrial/commercial criteria will need to be addressed by a remedial alternative(s) that may involve capping, removal, treatment, etc. Regarding recreational use, please see Section 3.62, "Recreational Facility for Public Use" of the RIDEM Remediation Regulations (revised Nov 2011).

33. Page 2-13, Section 2.4, Estimation of Areas and Volumes; whole section.

Remedial alternatives must be developed for soil in this FS and shall include alternatives for addressing all soil at the Site exceeding residential and commercial/industrial criteria. Therefore, the Navy must calculate the volumes of soil for all areas that exceed PRGs and present this in this section of this FS.

34. Page 3-5, Section 3.3, Evaluation of Retained Groundwater Process Options and Technologies

Please insert a new section which evaluates soil process options and technologies. How will the Navy address soil proposed to be left in place with concentrations exceeding residential criteria? Please evaluate these options include soil alternatives which consider capping, covering and/or treatment of soils in areas exceeding EPA and/or RIDEM criteria.

35. Page 3-6, Section 3.3.2, Land Use Controls; 4th paragraph.

The Land Use Control Remedial Design (LUC RD) must be approved by EPA and RIDEM and is enforceable under the FFA. Please add this language to this paragraph in this FS.

36. Page 4-2, Section 4.1.2, Component 1: Monitoring; whole section.

This section includes a discussion of monitored natural attenuation of metals in groundwater. RIDEM concurs with the Navy's conclusion that MNA is not applicable for metals. It is recommended that alternatives to address the source of the metals, such as actions to change the oxidation state of the soils, etc be evaluated.

37. Page 4-2, Section 4.1.2, Component 1: Monitoring; 3rd paragraph.

Please be advised that long-term monitoring may include the establishment of new wells based on the requirements of the long-term monitoring plan.

38. Tables 2-1, 2-2 & 2-3, Potential ARARs and TBCs

Please ensure that all of the State ARARs listed on the attached table are included in the list of ARARs in Tables 2-1, 2-2 and 2-3 of this Feasibility Study.

39. Table 2-4, Preliminary Remediation Goals – Soil

Preliminary Remediation Goals shall be developed for all contaminants exceeding RIDEM's Residential Direct Exposure and Leachability Criteria. Please revise this table accordingly and revise this FS as necessary.

40. Table 2-6, Preliminary Remediation Goals – Groundwater

Please ensure that the state's groundwater and drinking water standards are included in this table for the development of PRGs. Please note that the revised Remediation Regulations (November 2011) include a GA Groundwater Objective for arsenic of 0.01 mg/l.

41. Table 2-8, Background Concentrations – Soil

Please list the source of this data, the "Basewide Background Study Report (2008)", on this table.

42. Figures

Please develop PRGs for soil and include figures showing exceedances of PRGs in this FS.

RIDEM ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Air Quality	Air Pollution Control Regulations, RI Dept. of Health, Division of Air Pollution Control, effective 8/2/67, amended 7/19/07 - regulation No. 1 - Visible Emissions.	No contaminant emissions will be allowed for periods of more than three minutes in any one hour which is greater or equal to 20% opacity.	Action Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Pollution Control Regulation 5 – Fugitive Dust, RIDEM, 7/19/07	Reflects that reasonable precautions be taken to prevent particulate matter from becoming airborne.	Action Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Pollution Control Regulation 7 – Emissions Detrimental to Persons or Property, RIDEM, 7/19/07	Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interferes with the enjoyment of life and property.	Action and Chemical Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Pollution Control Regulation 15 – Control of Organic Solvent Emissions, RIDEM, 7/19/07	Limits the amount of organic solvents emitted to the atmosphere	Action and Chemical Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Toxics Guidelines, RIDEM, 4/04.	Companion to Air Pollution Control Regulation No. 22	Action and Chemical Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Guidelines for Air Quality Modeling for Air Toxics Substances, RIDEM, 9/04	Companion to Air Pollution Control Regulations Nos. 9 and 22	Action and Chemical Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Pollution Control Regulation 17 - Odors. 7/19/07	Prohibits the release of objectionable odors across property lines.	Action and Location Specific	RIGL Section 23-23, as amended 1992
Air Quality	Rhode Island Air Pollution Control Regulation 22 – Air Toxics, RIDEM, 7/19/07	This regulation prohibits the emissions of specified contaminants at rates which would result in ground level concentrations greater than acceptable ambient levels in the regulation.	Action and Chemical Specific	RIGL Section 23-23, as amended 1992
Drinking Water	Public Drinking Water Laws, Protection of Public Drinking Water	Applicable to remedial alternatives that affect public drinking water supplies.	Chemical and Location Specific	RIGL 46-14

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Groundwater	Rules and Regulations for Groundwater Quality, RIDEM, 5/15/06	Incorporated RI Groundwater Standards. Intends to protect and restore quality of groundwater resources for use as drinking water and other beneficial uses, to assure protect of public health and welfare and the environment These rules set numerical criteria for contaminants in certain aquifers classified as potential drinking water sources (such as the aquifer at the Site), and require that such groundwater be maintained at a quality that does not have any reasonable potential to cause a violation of surface water quality standards.	Action, Chemical and Location Specific	RIGL 46-12, 46-13.1, 23-18.9, 23-19.1, 42-17.6, and 42-17.1, 1956 as amended
Groundwater	Rules and Regulations for Groundwater Quality, RIDEM, 5/15/06	These rules prescribe design requirements for construction of monitoring wells, how monitoring shall be undertaken, and how wells shall be abandoned once monitoring is complete.	Action Specific	RIGL 46-12, 46-13.1, 23-18.9, 23-19.1, 42-17.6, and 42-17.1, 1956 as amended
Groundwater	Underground Injection Control Program Rules and Regulations, RIDEM, 6/10/84	Applicable for any remedial or removal action where subsurface discharge or underground injection of treated or untreated groundwater may occur.	Action and Location Specific	RIGL 46-12, 42-35, 42-17.3, 23-19.1, as of August 1983
Hazardous Waste	Rhode Island Rules and regulations for Hazardous Waste Management Sections 1 through 5, RIDEM 3/4/07	These rules apply to generators, transporters and treatment/storage facilities dealing with hazardous wastes. The statutes require disposal of solid waste and hazardous waste at licensed facilities. Outlines requirement for general waste analyses, security procedures, inspections, safety, etc.. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Action, Chemical and Location Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, Section 8, RIDEM 3/4/07.	Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities	Action and Location Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, Section 9, RIDEM 3/4/07.	Outlines requirement for general waste analyses, security procedures, inspections, safety, etc.. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.	Action and Location Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, Section 10, RIDEM 3/4/07.	Outlines design, operational, and closure requirements for new hazardous waste landfills.	Action and Location Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, Section 11, RIDEM 3/4/07.	Outlines design, operational, and closure requirements for incineration facilities	Action and Location Specific	RIGL 23-19.1, 23-19.14, 42-17.1-2, 46-12, 46-13.1, RIDEM 1956 as amended
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, RIDEM 3/4/07, Sections 12 and 13.	Requires minimal standards for solid waste landfill capping. Specifies type and depth of cap barrier layers and engineering standards. Includes measures to protect against odors and dust.	Action and Location Specific	RIGL 2-1, 2-22, 2-23, 5-51, 23-18.8, 23-19, 23-19.1, 23-23, 23-63, RIDEM 1956 as amended
Hazardous Materials, Soil, Groundwater, Surface water, Sediments	RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations), as amended November 2011.	Applicable for removal actions involving reporting, investigation, and remediation of contaminated sites. These rules establish criteria for cleanup of contamination caused by a release of hazardous material.	Action, Chemical and Location Specific	RIGL 23-19.1-11.1, 23-19.14-18, 42-17.1-2, 42-35, 46-12-3 and 46-12-5, as amended
Solid Waste	Rhode Island Rules and Regulations for Solid Waste Management, RIDEM Solid Waste Regulation No. 1, 10/25/05	Applicable for the minimization of environmental hazards associated with operation of solid waste facilities, including management and disposal of dredged material	Action, Chemical and Location Specific	RIGL 23-19.1-11.1, 23-19.14-18, 42-17.1-2, 42-35, 46-12-3 and 46-12-5, as amended
Solid Waste	Rhode Island Rules and Regulations for Solid Waste Management, RIDEM Solid Waste Regulation No. 2, 10/25/05.	Applicable for the construction of final covers and leachate collection systems; and Applicable for all monitoring plans that result from on-site remedial actions.	Action, Chemical and Location Specific	RIGL 2-1, 2-22, 2-23, 5-51, 23-18.8, 23-19, 23-19.1, 23-23, 23-63, RIDEM 1956 as amended

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Solid Waste	Rhode Island Rules and Regulations for Solid Waste Management, RIDEM Solid Waste Regulation No. 4, 10/25/05.	Outlines requirements for on-site waste incineration.	Action, Chemical and Location Specific	RIGL 2-1, 2-22, 2-23, 5-51, 23-18.8, 23-19, 23-19.1, 23-23, 23-63, RIDEM 1956 as amended
Surface Water	Rhode Island Water Quality Regulations, RIDEM, 7/11/06.	Incorporated RI Ambient Water Quality Standards. Classifies water use and defines water quality goals to protect public health and welfare, enhance the quality of state water, and serve the purpose of the CWA. These rules set ambient water quality criteria (AWQCs) applicable to surface waters in Rhode Island. These AWQCs may include numeric limits for chronic exposures to aquatic life, acute exposures to aquatic life, human consumption of water and aquatic organisms, and human consumption of aquatic organisms only. They also forbid activities or discharges that would cause a violation of these criteria.	Action, Chemical and Location Specific	RIGL 46-13.1, May 1992
Surface Water	Regulations for Rhode Island Pollutant Discharge elimination System (RIPDES), RIDEM, 2/25/03.	Applicable for discharges to surface waters and to protect waters from discharges of pollutants	Action, Chemical and Location Specific	RIGL 46-13.1, May 1992
Surface Water and Groundwater	Oil Pollution Control Regulations, RIDEM, 1/3/91	Establishes guidelines for the prevention of discharge, escape or release of oil into the waters of the State and to preserve and protect the quality of the waters of the State, consistent with the purposes of the Clean Water Act	Action and Location Specific	RIGL 46-12, 42-17.1 and 42-35, 1956 as amended
Waste Water	Rhode Island Pretreatment Regulations, RIDEM, 7/16/84	Applicable for any remedial or removal action where treated or untreated liquids are discharged to a Publicly Owned Treatment Works (POTW) facility	Action, Chemical and Location Specific	RIGL 46-13.1, May 1992

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Wetlands	Rules and Regulations governing the enforcement of the Freshwater Wetlands Act, RIDEM, 4/23/98; and amendments thereto 9/19/01.	Applicable to actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland. These rules require that all wetlands and wetland functions be protected to the maximum extent possible, including by preventing pollutants, sediment, direct discharges of stormwater runoff, or any material foreign to a wetland or hazardous to life from entering any wetland. The rules also require that hazardous material remediations fully protect, replace, restore and/or mitigate harm to any affected wetlands	Action and Location Specific	RIGL 2-1-18 et seq., as amended 1994
Wetlands	Regulations Adopted by the Department of Natural Resources Governing the Enforcement of Chapter 197 of the Public Laws of 1974	These rules should be considered should remedial activities impact any freshwater wetlands or associated buffer zones	Action Specific and Location	RIGL 2-1-20.1, 42-35-1, 2-1-18, September 197418 et seq., as amended 1994
Wetlands	Regulations Adopted by the Department of Natural Resources Governing the Enforcement of Chapter 213 of the Public Laws of 1974	These rules should be considered should remedial activities impact any freshwater wetlands or associated buffer zones	Action Specific and Location	RIGL 2-1-20.1, 42-35-1, 2-1-18, September 197418 et seq., as amended 1994
Wetlands	Coastal Resources Management Council Regulations	Sets standards for management and protection of coastal resources.	Action and Location Specific	RIGL 46-23-1 *et seq*
Other	Rhode Island Hazardous Substance Community Right-to-Know Act, RIGL 23-24.4	Establishes rules for public right to know concerning hazardous waste storage, discharge, emissions and transportation. Applicable if remedial action involves the off-site disposal or on-site treatment of hazardous substances.	Action, Chemical and Location Specific	RIGL, Title 23, Chapter 24.4 Public Right to Know Requirements as amended in 1989.
Other	Rhode Island Endangered and Threatened Species Act	To be considered if remedial alternative affects any plants or animals of special concern	Location Specific	RIGL 20-37